Appl. No. 10/620,734
Reply to Office Action dated January 13, 2006

IN THE SPECIFICATION

In the Drawings

Please substitute informal drawing sheets 1-7 as filed with the original

specification with formal drawing sheets 1-7 filed with this response.

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REMARKS

Reconsideration is requested.

In this response, claims 1, 8, 10, and 16 have been amended. Claims 20 and 21 were allowed. Claims 1-21 remain pending. This response is filed with a 2-month extension of time fee authorized to be charged to IBM's Deposit Account Number as indicated in the amendment transmittal sheet. It is requested that any deficiencies be charged to such indicated Deposit Account.

In the instant Office Action, claims 1, 3, and 7 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,742,840 to Hansen; claims 10-15 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,205,536 to Yoshida; claims 2 and 6 stand rejected under 35 USC 103(a) as being unpatentable over Hansen in view of U.S. Patent Publication 2002/178350 to Chung; claim 4 stands rejected under 35 USC 103(a) as being unpatentable over Hansen in view of U.S. Patent No. 5,926,840 to Gold; claim 5 stand rejected under 35 USC 103(a) as being unpatentable over Hansen in view of U.S. Patent No. 5,544,342 to Dean; claims 8 and 9 stand rejected under 35 USC 103(a) as being unpatentable over Hansen in view of Chung; claim 16 stands rejected under 35 USC 103(a) as being unpatentable over Yoshida in view of U.S. Patent No. 6,401,196 to Lee and U.S. Patent Publication 2004/268047 to Dayan; and claims 17-19 stand rejected under 35 USC 103(a) as being unpatentable over the combination of Yoshida, Lee and Dayan.

Please enter formal drawings (sheets 1-7) submitted with this response in place of the informal drawings earlier submitted. It is respectfully submitted that the formal drawings submitted herewith contain no new matter.

11

Appl. No. 10/620,734
Reply to Office Action dated January 13, 2006

Independent claims 1, 8, 10, and 16 have been amended to include subject matter indicated to be allowable. For example, amended claim 1 recites, among other things, "...wherein the system is configured to:

fetch instruction packets from the primary memory unit,

write a copy of said instruction packets into the DLB,

set a valid bit to assert validity of said DLB,

enter an ACTIVE state when a backward branch is taken within a range of a loop,

enter an IDLE state when said backward branch completes a loop and a change of flow branch is taken out of range of said loop, and

enter an OVERFLOW state if the DLB fills up and said change of flow branch is not taken; and

if in the IDLE state, enter the ACTIVE state if a last loop captured in the DLB is repeated."

None of the prior art references teach or suggest the above recited limitation of claim 1. Further, such has been acknowledged by the Office Action on page 16 (see last two lines of the first full paragraph which states "...none of the prior art mentions "change of flow" or "entering the ACTIVE state if a last loop captured in the dynamic loop buffer is repeated.")

In view of the above, claim 1 is in condition for allowance. Claims 2-7 which depend from claim 1 are also in condition for allowance as they limit the scope of the patentable subject matter and none of the prior art references, either alone or in combination, teach or suggest all the elements of such respective claims.

Amended claim 8 also includes the subject matter indicated to be allowable. Neither Hansen nor Chung, alone or in combination, teach or suggest all the elements of amended claim 8. Claim 8 is therefore believed to be in condition for allowance. Claim 9 which depends from claim 8 is therefore allowable.

Amended claim 10 is allowable for similar reasons set forth above with respect to claim 1. Yoshida fails to teach or suggest all the elements of claim 10. Claim 10 is therefore believed to be in condition for allowance. Claims 11-15 which depend from claim 10 are also allowable.

12

Appl. No. 10/620,734
Reply to Office Action dated January 13, 2006

Amended claim 16 recites, among other things, <u>if in the IDLE state, enter the ACTIVE state if a last loop captured in the DLB is repeated</u>. None of the references of record, either alone or in combination, teach or suggest such feature. Further, this language is indicated to be allowable on page 16 of the Office Action. Claim 16 is therefore believed to be in condition for allowance. Claims 17-19 which depend from claim 16 are therefore allowable as well. Claims 17-19 are further allowable as none of the prior art references, either alone or in combination, teach or suggest all the elements of such respective claims.

CONCLUSION

For all the reasons advanced above, Applicants respectfully submit that the application is in condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview before issuance of any such subsequent action.

Respectfully submitted,

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13